

Model #	TRU-2456-32-2	Minimum Joist Spacing	15"
Box Width =	103"	Double wide	No Offset Box
Box Length =	76 IL	89.6" 12" MIN/BEAM	No Clearency
No Skylights		No Origint Dormer	
No Porches		No Sunken Floor	No Paralel Roof
Joist Size =	92 sq 2x6	Laps 9M/5"	

Wind Zone 1 Standard Roof

2x4 MCP							Block Dist. X=0	
Distal Zone Contractions								
Shearwall	Dist./Htch	Length	P/F	# of Joints	Length	Notes		
A	0"	128"	152	2	21"			
C	56"	128"	152	2	21"			
Wind Zone 2 Standard Roof								
7/16" Fused Shearwall and Ceiling Beams with 15 gp 0.012 @ 0.012 @ 0.15 Diagonal, 2x4 SFP AC Top Plate 1x6x6x12w MCP 2 x 2 SFP 1x6x6x12w							56" inch Interval	
2x4 MCP							Block Dist. X=0	
Distal Zone Contractions								
Shearwall	Dist./Htch	Length	P/F	# of Joints	Length	Notes		
A	0"	140"	162	2	21"			
B	23.83"	128"	430	2	41"			
C	95.61"	124"	250	2	31"			
Wind Zone 3 Standard Roof								
7/16" Fused Shearwall and Ceiling Beams with 15 gp 0.012 @ 0.012 @ 0.15 Diagonal, 2x4 SFP AC Top Plate 1x6x6x12w MCP 2 x 2 SFP 1x6x6x12w							95" inch Interval	
2x4 MCP							Block Dist. X=0	
Distal Zone Contractions								
Shearwall	Dist./Htch	Length	P/F	# of Joints	Length	Notes		
A	0"	119"	250	2	21"			
B	23.83"	F-4	430	2	393			
C	95.61"	F-4	250	2	292			

MP-28 TRIL-2856-32-20 100

SCALE 3/16"=1'	PLAN NO. TRU-2856-32	SHEET NAME FLOOR PLAN	SHEET NO. FP-0
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MODEL NAME	Cedar	MODEL NO.	TR128563C
DRAWN BY		BOX SIZE	28' x 56'
		MODEL SQ. FT.	1,475



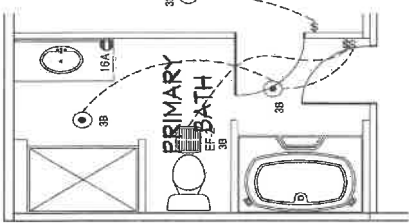
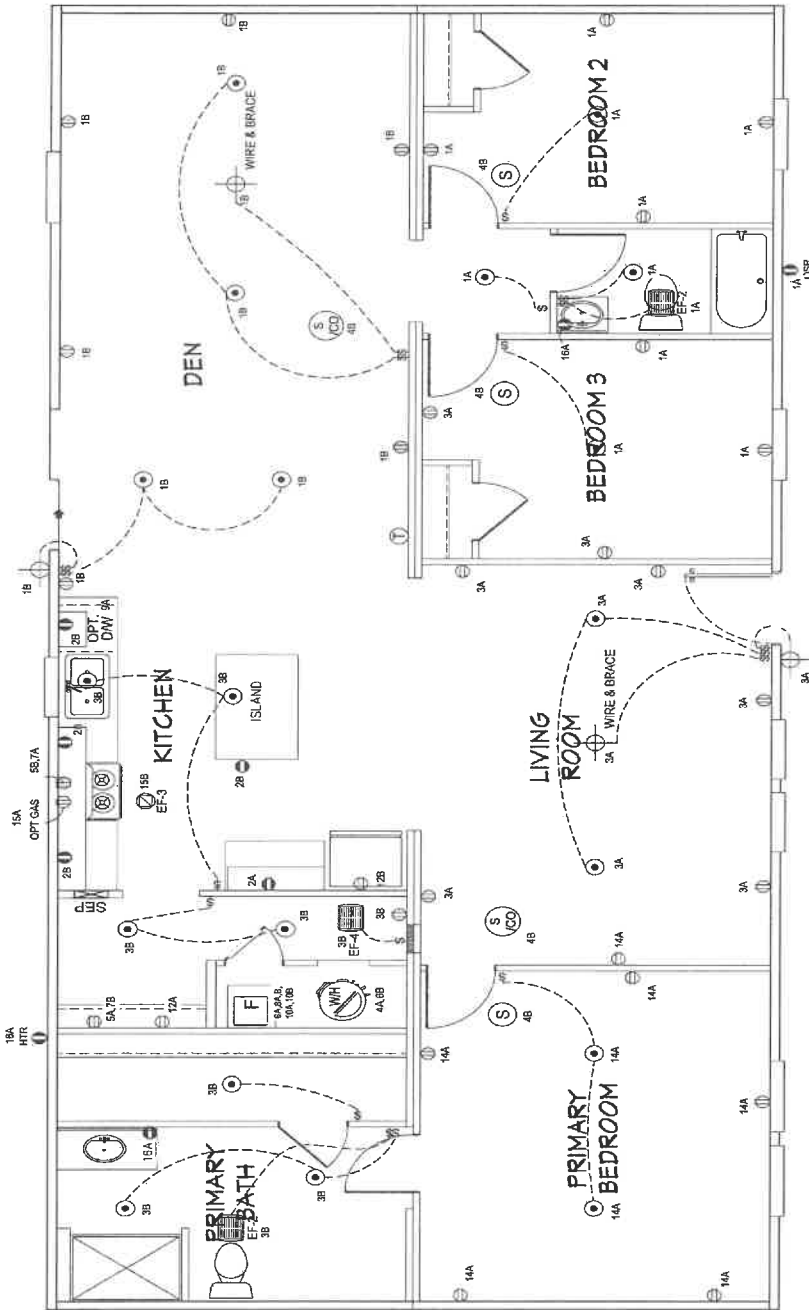
REVISION	DATE

MODEL NAME	Cedar
MODEL NO.	TRT28563C
BOX SIZE	28' x 56'
MODEL SQ. FT.	1,475

DRAWN BY	Jeremy Huiting
DATE DRAWN	1/16/2024
DATE PRINTED	9/10/2025
SCALE	3/16"=1'
PLAN NO.	TRU-2856-32-2
SHEET NAME	ELEC. PLAN
SHEET NO.	FI-1



MP-28.TRU-2856-32-2.2



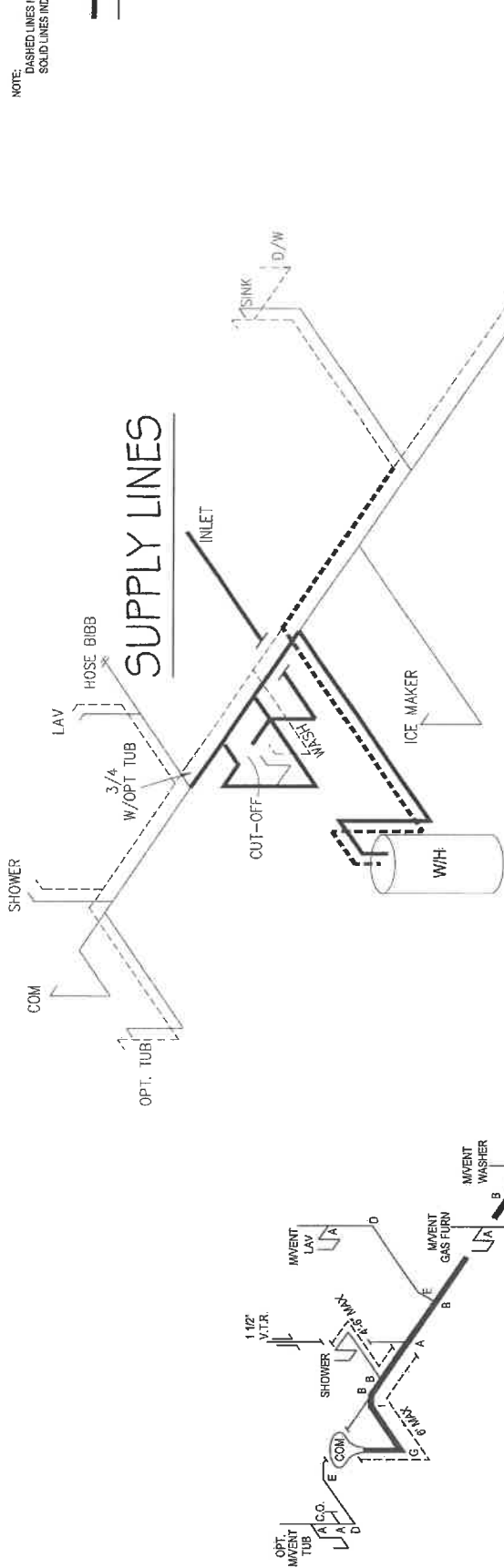
- NOTES:
1. ALL CIRCUITS SHOWN ARE FOR REFERENCE AND MAY BE CHANGED BASED ON OPTIONAL COMPONENTS INSTALLED IN THE HOME. REFER TO DAPA MANUAL FOR SYMBOL CHART.
 2. EITHER LIGHT OR RECEPTACLE MUST CONNECT TO SWITCH.
 3. EF-14 60 CFM EXHAUST FAN REQUIRED FOR THERMAL ZONE II; THERMAL ZONES I & II MAY USE FAN OR WINDOW WITH 3 SQ. FT. OPENABLE GLASS.
 4. EF-24 50 CFM EXHAUST FAN REQUIRED THERMAL ZONE I, II, AND III.
 5. EF-34 100 CFM RANGE EXHAUST FAN SWITCH AT HOOD.
 6. EF-44 WHOLE HOUSE VENTILATION REQUIREMENTS PER DAPA MANUAL.
 7. REFER TO DAPA MANUAL OR THE MFG. INSTALLATION INSTRUCTIONS FOR THE MINIMUM SIZE FOR SPECIFIC APPLIANCE AND MODEL BEING INSTALLED.
 8. ALL SMOKE ALARMS TO BE LOCATED ON THE CEILING.
 9. CARBON MONOXIDE ALARMS ARE ONLY REQUIRED WHEN HOME HAS EITHER FUEL BURNING APPLIANCES, IS GARAGE READY OR IS BASEMENT READY. REFERENCE DAPA MANUAL FOR ADDITIONAL INFORMATION.
 10. DIMENSIONS SHOWN ON PRINT ARE APPROXIMATE AND TO BE USED ONLY AS A GUIDELINE.

CIRCUIT	CIRCUIT #	WIRE	BREAKER	CIRCUIT	CIRCUIT #	WIRE	BREAKER	CIRCUIT	CIRCUIT #	WIRE	BREAKER
LIGHT/RECEP	1A, 3A, 13B, 14A	14-2	15-SP	DRYER	5A, 7B	SEE NOTE #8	SEE NOTE #8	BATHROOM	16 A	12-2	20-SP
LIGHT/RECEP	1B, 3B, 14B	14-2	15-SP	WATER HEATER	4A, 6B	SEE NOTE #8	SEE NOTE #8	OPT GDISP	9B	SEE NOTE #8	SEE NOTE #8
KITCHEN	2A, 2B	12-2	20-SP	RANGE	5B, 7A	SEE NOTE #8	SEE NOTE #8	OPT SPA/WH/AC	11A, B	SEE NOTE #8	SEE NOTE #8
WASHER	12A	12-2	20-SP	FURNACE	6A, 8A, B, 10A, B	SEE NOTE #8	SEE NOTE #8	FREEZER	13A	SEE NOTE #8	SEE NOTE #8
RANG HOOD/ MICROWAVE	15B	SEE NOTE #6	SEE NOTE #6	OPT DOWASH	9A	SEE NOTE #8	SEE NOTE #8	OPT ELEC. FIREPLACE	16B	SEE NOTE #8	SEE NOTE #8
OPT. GAS RANG	15A	SEE NOTE #6	SEE NOTE #6	SMOKECO DETCT	4B	SEE NOTE #8	SEE NOTE #8				
				REFER	12B	SEE NOTE #8	SEE NOTE #8				

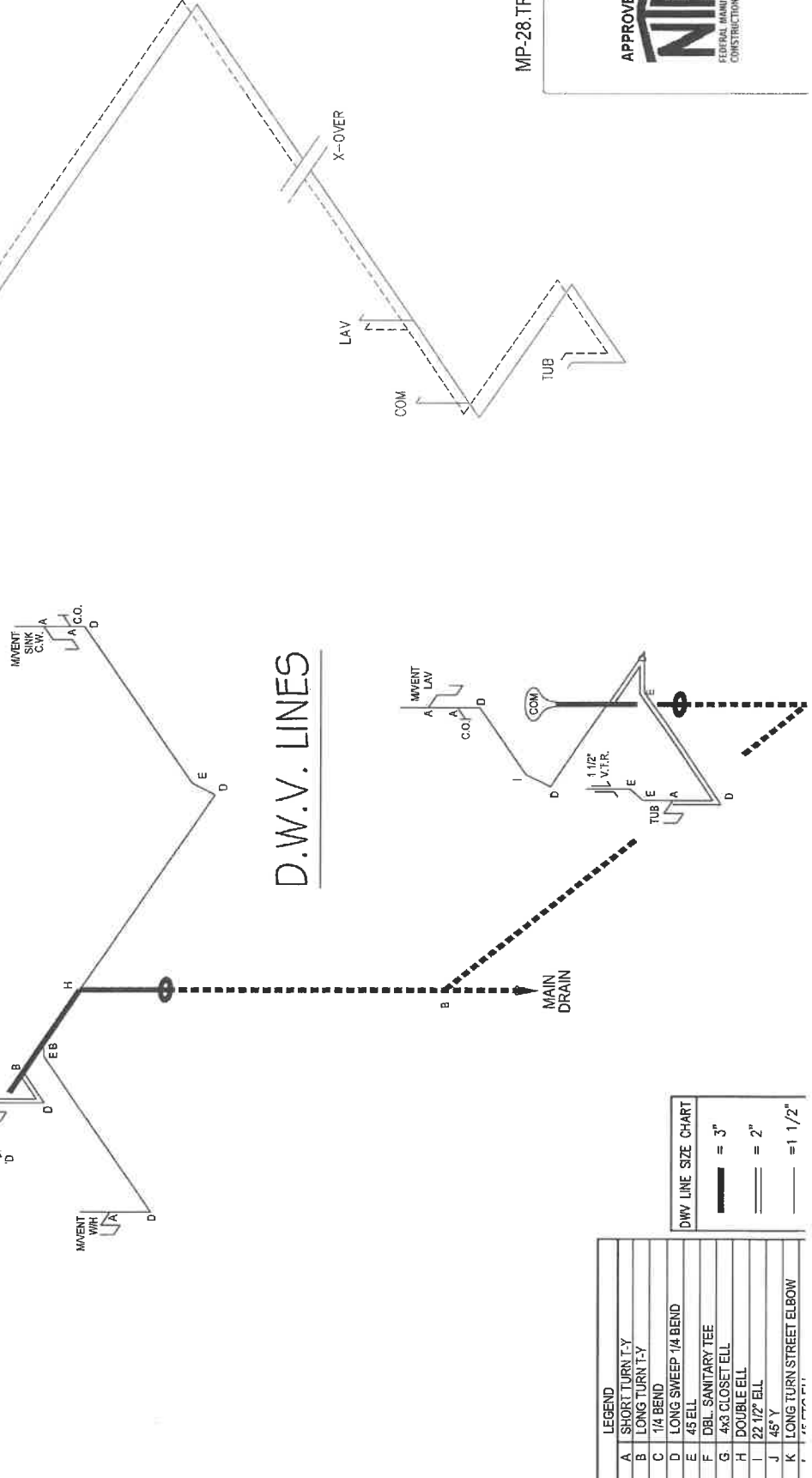
NOTE: DASHED LINES INDICATE HOT WATER
SOLID LINES INDICATE COLD WATER

— = 3/4"
— = 1/2"

SUPPLY LINES



D.W.V. LINES



LEGEND	
A	SHORT TURN T-Y
B	LONG TURN T-Y
C	1/4 BEND
D	LONG SWEEP 1/4 BEND
E	45 ELL
F	DBL. SANITARY TEE
G	4x3 CLOSET ELL
H	DOUBLE ELL
I	22 1/2° ELL
J	45° Y
K	LONG TURN STREET ELBOW

DWV LINE SIZE CHART	
—	= 3"
—	= 2"
—	= 1 1/2"

APPROVED BY
NIA INC.
9/11/2025
FEDERAL MANUFACTURED HOME
CONSTRUCTION AND SAFETY STANDARDS

MP-28-TRU-2856-32-2.3

DATE PRINTED
8/25/2025

DATE DRAWN
1/16/2024

DRAWN BY
Jeremy Huiting

MODEL NAME
Cedar

MODEL NO.
TRT28563C

BOX SIZE
28' x 56'

MODEL SQ. FT.
1,475

REVISION

DATE

DATE



SHEET NO.
PI -1

SUPPLY

D.W.V. &

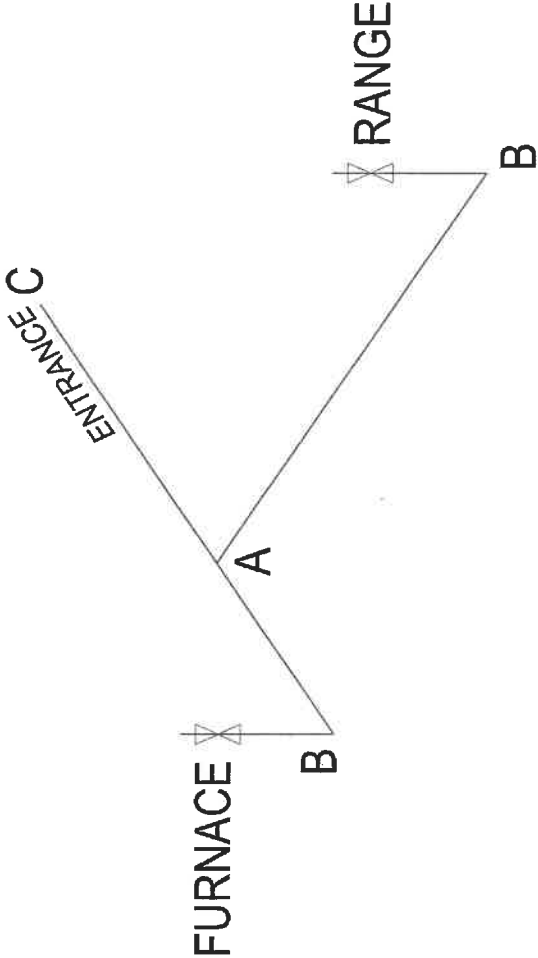
SHEET NAME
TRU-2856-32-2

PLAN NO.

SCALE
3/16"=1'

LEGEND		APPLIANCE BTU'S RATINGS MAX. INPUT		GAS LINE SIZE CHART	
SYM	FITTINGS				
A	TEE	FURNACE	60,000 BTU'S	— = 1"	
B	90 ELL	W/H	N/A BTU'S	— = 3/4"	
X	VALVE	RANGE	52,000 BTU'S		
C	CAP	DRYER	N/A BTU'S		

MDL = 15'



- NOTES:
- 1) ALL PIPE IS 3/4" I.D. CAST (EXCEPT WHERE NOTED OTHERWISE)
 - 2) MDL=MAX. DETERMINED LENGTH OF PIPE
 - 3) FITTING MAY BE ADDED OR SUBTRACTED TO TRAVERSE VARIATIONS IN AXLE QUANTITY, PLACEMENT, AND FRAME TYPE.
 - 4) INLET LOCATION MAY VARY TO STAY WITHIN MAX. DETERMINED LENGTH

MP-28.TRU-2856-32-2.4

DATE PRINTED

8/21/2025

SCALE

3/16"=1'

PLAN NO.

TRU-2856-32-2

SHEET NAME

GAS LINES

SHEET NO.

PI -4

MODEL NAME

Cedar

MODEL NO.

TRT28563C

BOX SIZE

28' x 56'

MODEL SQ. FT.

1,475

DRAWN BY

Jeremy Huiting

DATE DRAWN

1/16/2024

CLAYTON BUILT

APPROVED BY

9/11/2025

NTA INC.

FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

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Manual S Compliance Report
Entire House
Clayton Homes

Job: TRU-2856-32-2-FDJ
Date: Aug 21, 2025
By:

5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: TRU-2856-32-2-FDJ

Cooling Equipment

Design Conditions

Outdoor design DB:	90.4 °F	Sensible gain:	15870 Btuh	Entering coil DB:	77.6 °F
Outdoor design WB:	73.3 °F	Latent gain:	4745 Btuh	Entering coil WB:	64.5 °F
Indoor design DB:	75.0 °F	Total gain:	20615 Btuh		
Indoor RH:	50%	Estimated airflow:	780 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Smart Comfort	Model:	R4H5S24*K*AAA*+FEVA0024**+NAVA43601CK
Actual airflow:	780 cfm		
Sensible capacity:	18348 Btuh	116% of load	
Latent capacity:	4848 Btuh	102% of load	
Total capacity:	23196 Btuh	113% of load	SHR: 79%

Heating Equipment

Design Conditions

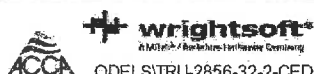
Outdoor design DB:	21.0 °F	Heat loss:	27110 Btuh	Entering coil DB:	61.7 °F
Indoor design DB:	70.0 °F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Smart Comfort	Model:	R4H5S24*K*AAA*+FEVA0024**+NAVA43601CK
Actual airflow:	780 cfm		
Output capacity:	22800 Btuh	84% of load	Capacity balance: 30 °F
Supplemental heat required:	4310 Btuh		Economic balance: -99 °F

Backup equipment type:	Elec strip		
Manufacturer:	Smart Comfort	Model:	FEVA002410
Actual airflow:	780 cfm		
Output capacity:	10.0 kW	126% of load	Temp. rise: 41 °F

Meets all requirements of ACCA Manual S.



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...ODELS\TRU-2856-32-2-CEDAR\TRU-2856-32-2-FDJ.rup Calc = MJ8 Front Door faces: N



Project Summary
Entire House
Clayton Homes

Job: TRU-2856-32-2-FDJ
Date: Aug 21, 2025
By:

5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: TRU-2856-32-2-FDJ

Notes: DUCT CAPACITY: 26,000 BTUH

APPROVED BY



Design Information

Weather: TN 25

Winter Design Conditions

Outside db	21 °F
Inside db	70 °F
Design TD	49 °F

Ventilation Method MJ8

Heating Summary

Structure	16750 Btuh
Ducts (R-0.0)	3593 Btuh
Central vent (130 cfm)	6767 Btuh
Outside air	
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	27110 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	1443	1443
Volume (ft³)	11544	11544
Air changes/hour	0.45	0.23
Equiv. AVF (cfm)	87	44

Heating Equipment Summary

Make	Smart Comfort
Trade	15 SEER2 R SERIES R410A HP
Model	R4H5S24*K*AAA*
AHRI ref	210537896
Efficiency	7.5 HSPF2
Heating input	
Heating output	22800 Btuh @ 47°F
Temperature rise	28 °F
Actual air flow	780 cfm
Air flow factor	0.038 cfm/Btuh
Static pressure	0.30 in H2O
Space thermostat	
Capacity balance point = 30 °F	
Backup: Smart Comfort FEVA002410	
Input = 10 kW, Output = 34121 Btuh, 100 AFUE	

Summer Design Conditions

Outside db	90 °F
Inside db	75 °F
Design TD	15 °F
Daily range	M
Relative humidity	50 %
Moisture difference	34 gr/lb

Sensible Cooling Equipment Load Sizing

Structure	11963 Btuh
Ducts (R-0.0)	1781 Btuh
Central vent (130 cfm)	2127 Btuh
Outside air	
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.95
Equipment sensible load	15140 Btuh

Latent Cooling Equipment Load Sizing

Structure	1777 Btuh
Ducts	98 Btuh
Central vent (130 cfm)	2870 Btuh
Outside air	
Equipment latent load	4745 Btuh
Equipment Total Load (Sen+Lat)	19885 Btuh
Req. total capacity at 0.70 SHR	1.8 ton

Cooling Equipment Summary

Make	Smart Comfort
Trade	15 SEER2 R SERIES R410A HP
Cond	R4H5S24*K*AAA*
Coil	FEVA0024**+NAVA43601CK
AHRI ref	210537896
Efficiency	12.0 EER2, 15.2 SEER2
Sensible cooling	16380 Btuh
Latent cooling	7020 Btuh
Total cooling	23400 Btuh
Actual air flow	780 cfm
Air flow factor	0.057 cfm/Btuh
Static pressure	0.30 in H2O
Load sensible heat ratio	0.77

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



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...ODELS\TRU-2856-32-2-CEDAR\TRU-2856-32-2-FDJ.rup Calc = MJ8 Front Door faces: N

MP-28.TRU-2856-32-2.5.1

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Page 1

CLAYTON HOME BUILDING GROUP

CEDAR

Model Number	TRT28563C	Drawing Number	TRU-2856-32-2	Version 24
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BOX SIZE: 26.33 ft. x 56 ft.

AVG. SIDEWALL HEIGHT = 8 FEET

PERCENTAGE OF CEILING THAT IS VAULTED = 62.7%

12 INCH DIAMETER XOVER DUCT AREA = 78.5 SQ.FT. MAX. WITH R-8 INSULATION

IN-FLOOR DUCT SYSTEM

	UNHEATED FLOOR	WALL	FLAT ROOF
INSULATION VALUES	R-11 OR / R-11 FW / R-11 BIB	R-13	R-33
DAPIA PAGE	THP-335	THP-515	THP-1275
U VALUE (BTUH/SQ.FT.-F)	0.0436	0.0853	0.0313

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Overhead Duct	
Diameter	Length
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
15	0
Exterior Supply	Length
14	0
16	0
Exterior Return	Length
14	0
16	0



Window Glass Area:

Doors:

	Area	U Value	UA
Front	20.30	0.189	3.84
Rear	0.00	0.360	0.00
SGD	38.50	0.300	11.55
Other Door	0.00	0.330	0.00
OSB	0.00	0.000	0.00
Skylights	0.00	0.330	0.00
Standard	98.00	0.300	29.40
Option	0.00	0.300	0.00
Net:			
Floor	1474.67	0.044	64.30
Wall	1160.53	0.085	98.99
Ceiling	1474.67	0.0313	46.16
Ext. Duct	78.50	0.242	18.98
Th. Zone 1:			
Th. Zone 2:			
Th. Zone 3:			
Ext. Duct	78.50	0.223	17.48
Ext. Duct	78.50	0.206	16.14
Overhead TZ 1:			
Supply	0.00	0.000	0.00
Overhead TZ 2:			
Supply	0.00	0.000	0.00
Overhead TZ 3:			
Supply	0.00	0.00	0.00

Energy Star v3 & ZERH Max Glass (Sq ft)	
Th. Zone 1	251.0
Th. Zone 2	116.4
Th. Zone 3	0.0

Thermal Zone	Outdoor Design Temp (F)	UA	Uo	EStar v3 & ZERH Compliant	Heatloss BTUH/F
1	11	273.22	0.063	OK	388.50
2	0	271.71	0.063	OK	387.00
3	-14	270.37	0.062	NG	385.60

Design Temperatures	
Furnace Heating Temp (F)	Economy Outdoor Temp (F)
-18	9
-35	-4
-62	-22
-33	-2
-84	-38
-136	-74

10kW
12kW
15kW
40k Gas
60k Gas
80k Gas

Thermal Zone	U-Value	Thermal Zone	U-Value	Thermal Zone	U-Value
Energy Star Version 2					
1-EHP-S	0.080	2-EHP-S	0.080	3-EHP-S	0.079
1-GAS-S	0.080	2-GAS-S	0.080	3-GAS-S	0.071
1-ENV-S	0.076	2-ENV-S	0.067	3-ENV-S	0.059
1-EHP-M	0.074	2-EHP-M	0.074	3-EHP-M	0.074
1-GAS-M	0.074	2-GAS-M	0.074	3-GAS-M	0.065
1-ENV-M	0.071	2-ENV-M	0.064	3-ENV-M	0.056

Energy Star Version 3 & ZERH					
1 Single	0.076	2 Single	0.065	3 Single	0.057
1 Double	0.070	2 Double	0.063	3 Double	0.054